the nue effort

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Goal

- Produce result by June 2006.
- Likely result: 1e20 protons
  - expected numu events: ~440
  - expected nue events: ~ 2 signal/3.4 back (with known efficiencies)
  - for sin^2 2th13 =0.12

Things to do

- Decide on types of analysis
  - proposal: 3 analysis
    - computer based with current methods
    - computer based with alternate methods
    - eyescan based.
    - try to get one done by June.

Task List as of 25th Oct 2005
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o Definition of automated analysis techniques and PIDs - Tingjun, Josh, Mayly
o Definition of scan analysis techniques - Tony, Dan
o Scan Effort Organiser - Chris
o Definition of beam quality cuts - Mark, Mary
o Definition of data quality cuts for ND, FD - ???, Caius
o Cosmic ray background study in FD - Hai
o NC background estimate from muon removal in data - Mark, Mary
o Electrons from secondary kaons in ND - Ben, Caius, Carlos
o Intranuke study using new MC - Tingjun
o ND Data/MC analyis - Josh, Tingjun, Chris
o Writing MDC note, updating fit tools - Chris, Mayly
o Generating nue CC based on numu CC - Chris, Caius
o Analysis note writing - All, Editor: Milind

- Get involved in the new production. Make sure the nue stuff is not screwed up. Nothing will cause more delay than this.
- Have a clear set of cuts for preselection. this should determine the data sets from 1) beam, 2) near det. 3) far det. to be used in the final analysis. Need to have this figured out completely by December. The data after December will just be small additions to this.

- Need a couple of new tools for completely satisfactory analysis.
  - Replacing muon in a CC event by an electron. This will give us a large sample of "electron" events based on data.
  - system for eyescanning efficiency, unless we abandon eyescan based analysis for the moment.

- Need a few critical analysis
  - Electron finding in near detector. Comparison to MC.
  - Near to Far shower energy calibration. Perhaps this comes from the CC group.
  - Efficiency for electron finding in near and far using MC and data (with muon replacement).

List of notes that are needed

- Data selection summary: 1) for beam, 2) ND, 3) FD. Preferably in one technical note. I urge this be done by December with updates in Jan. and Feb.
- Near detector electron finding. (T.J.'S note) timescale should be March meeting.
- 2 complete analysis notes by June: for computer based and second for eyescan based.